FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/16/97
Date Received: 12/10/97
Project: Metro Grab, PO #M59356
Date Samples Extracted: 12/11/97
Date Extracts Analyzed: 12/11/97

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	Chromium	Copper	Nickel	Zinc
M59356	0.66	0.37	0.59	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/16/97
Date Received: 12/10/97
Project: Metro Grab, PO #M59356

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 712013-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.34	0.34	0	0-20
Copper	mg/L (ppm)	0.21	0.22	5	0-20
Nickel	mg/L (ppm)	0.39	0.42	7	0-20
Zinc	mg/L (ppm)	<0.05	<0.05	nm	0-20

Laboratory Code: 712013-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	0.34	103	106	80-120	3
Copper	mg/L (ppm)	5	0.21	104	107	80-120	3
Nickel	mg/L (ppm)	10	0.39	103	103	80-120	0
Zinc	mg/L (ppm)	5	<0.05	102	105	80-120	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	108	104	80-120	4
Copper	mg/L (ppm)	5	108	106	80-120	2
Nickel	mg/L (ppm)	10	107	104	80-120	3
Zinc	mg/L (ppm)	5	106	104	80-120	2

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.
3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282

PJ#712039

KJ AJ
12-10-97
1:10

SAMPLE CHAIN OF CUSTODY

Send Report To: Alaska Copper Works Contact Gerald Thompson
Company
Address 628 Howell St
City, State, Zip Seattle WA
Phone # (206) 382-8379 FAX # (206) 382-4309 Date 12-10-97

SITE NO.	PROJECT NAME	PURCHASE ORDER #
7238	metro Grab	M59356

SAMPLERS *(signature)*

PROJECT LOCATION: 3200 6th Ave S

REMARKS

SAMPLE DISPOSAL INFORMATION
- ☐ Dispose after 30 days
- ☑ Return Samples
- ☐ Call for Instructions

Sample #	Date/Time Sampled	Type of Sample	# of Jars	Lab Sample #	Analyses Requested
M59356	12/10/97 12:30	H2O	1	01	Cr Cu Ni Zn

SIGNATURE	PRINT NAME	COMPANY	Date	Time
Relinquished by:	Gerald Thompson	ACW	12/10/97	1:05pm
Received by:	S. Oborn	F+B, Inc.	12/10/97	1:05pm
Relinquished by:				
Received by:				

FORMS/COC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 16, 1997

DUPLICATE COPY

INVOICE #97ACU1216-3

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Grab, PO #M59356: Results of testing requested by Gerry Thompson for material submitted on December 10, 1997.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ $65 per sample	$ 65.00
Amount Due	$ 65.00

FEDERAL TAX ID (b) (6)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 16, 1997

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 10, 1997 from your Metro Grab, PO #M59356 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson
Chemist

Enclosures
ACU1216R.DOC